

ABSTRACT

Method are provided for efficiently inducing, *in vivo/in vitro*, proliferation of neural stem cells, the most important for transplantation therapy etc. of nerve injuries or nerve function insufficiency. Also provided are methods for using the neural stem cells obtained by such a proliferation-inducing method. Mammalian nervous tissues containing neural stem cells are isolated, the neural stem cells are cultured in a culture medium containing growth factors, such as EGF and FGF, and then the neural stem cells are co-cultured with dendritic cells, such as an immature dendritic cell subset having the CD11c surface marker on the cell surface and blood cells, such as spleen cells and CD8-positive T cells. Or the neural stem cells after culture are cultured in the presence of GM-CSF. Alternatively, the neural stem cells after culture are cultured in the culture supernatant of dendritic cells and/or blood cells.